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DEPARTMENT: CHEMICAL ENGINEERING

COURSE CODE: CHE 312

COURSE TITLE: PROCESS INSTRUMENTATION

ASSIGNMENT TITLE: PROCESS INSTRUMENTATION DIAGRAMS (PIDs)

1. Briefly describe chemical process diagrams

A process flow diagram (PFD) is a diagram commonly used in chemical and process engineering to indicate the general flow of plant processes and equipment. The process flow diagram displays the relationship between the major equipment of a plant facility and does not show minor details such as piping details and designations.

2. Outline the purpose of P&ID and list its division.

Note: P&ID means piping and instrumentation diagrams.

Functions and purpose of P&ID

P&IDs are foundational to the maintenance and modification of the process that is graphically represented. At the design stage, the diagram also provides the basis for the development of the system control schemes, like; Hazard and operability study (HAZOP) For processing facilities, it's a graphic representation of;

- i. Key piping and instrument details
- ii. Control and shutdown schemes
- iii. Safety and regulatory requirements
- iv. Basic start up and operational information

3. Give five common P&ID symbols with instrument abbreviations used in instrument diagram

- i. FC – Flow controller
- ii. LC – Level controller
- iii. LG – Level gauge
- iv. FE – Flow element
- v. LA – Level alarm

REFERENCES

www.wikipedia.org

www.instrumentationtoolbox.com